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10/029,766	12/18/2001	Adrian Crisan	1662-55100 JMH (P01-3806)	4713
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)			
	10/029,766	CRISAN ET AL.			
Office Action Summary	Examiner	Art Unit			
	John J. Romano	2192			
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply					
A SHORTENED STATUTORY PERIOD FOR REP WHICHEVER IS LONGER, FROM THE MAILING - Extensions of time may be available under the provisions of 37 CFR 1 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory perio - Failure to reply within the set or extended period for reply will, by statu. Any reply received by the Office later than three months after the mail earned patent term adjustment. See 37 CFR 1.704(b).	DATE OF THIS COMMUNICATION 1.136(a). In no event, however, may a reply be tind d will apply and will expire SIX (6) MONTHS from the, cause the application to become ABANDONE	N. nely filed the mailing date of this communication. ED (35 U.S.C. § 133).			
Status					
 1) ⊠ Responsive to communication(s) filed on 4/0 2a) ⊠ This action is FINAL. 2b) ☐ Th 3) ☐ Since this application is in condition for allow closed in accordance with the practice under 	nis action is non-final. Fance except for formal matters, pro				
Disposition of Claims					
4) ⊠ Claim(s) <u>1,4-9,11-16,18-20,27 and 28</u> is/are 4a) Of the above claim(s) is/are withdr 5) □ Claim(s) is/are allowed. 6) ⊠ Claim(s) <u>1, 4-9, 11-16, 18-20 and 27-28</u> is/ar 7) □ Claim(s) is/are objected to. 8) □ Claim(s) are subject to restriction and	rawn from consideration.				
Application Papers					
9) The specification is objected to by the Examin 10) The drawing(s) filed on is/are: a) accomplicated any objection to the Replacement drawing sheet(s) including the correct of the output of the second se	ccepted or b) objected to by the edrawing(s) be held in abeyance. Selection is required if the drawing(s) is ob	e 37 CFR 1.85(a). ejected to. See 37 CFR 1.121(d).			
Priority under 35 U.S.C. § 119					
 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 					
Attachment(s) 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	4) Interview Summary Paper No(s)/Mail D 5) Notice of Informal F 6) Other:	ate			

DETAILED ACTION

1. Applicant's amendment and response received April 3rd, 2007, responding to the January 3rd, 2007, Office action provided in the rejections of claims 1, 4-9, 11-16, 18-20 and 27-28, wherein claims 1, 4-9, 11-16, 18-20 and 27-28 remain pending in the application and which have been fully considered by the examiner.

Applicant arguing for the claims being patentable over *the prior art* (see pages 6-12 of the response) are not persuasive, as will be addressed under Prior Art's Arguments – Rejections section at item 2 and the claim rejections below. Accordingly, Applicants' arguments necessitated additional clarifications. Thus, the rejection of the claims over prior art in the previous Office action is maintained in light of the necessitated additional clarifications provided hereon and **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Prior Art's Arguments - Rejections

2. Applicant's arguments filed April 3rd, 2007, in particular on pages 10-12, have been fully considered but they are not persuasive. For example,

- (A) In response to applicant's argument that *Marsh* does not show or suggest the concept of flashing the ROM with an upgraded image before the loading of any portion of the operating system in RAM (See response page 10, first paragraph) the examiner respectfully disagrees. Applicant's argument appears to be based on the premise that *Marsh* teaches downloading the installed upgrade with the operating system. It is pointed out that *Marsh* is not cited for teaching the download of the upgrade. However, the fact that *Marsh* downloads the upgraded software with the operating system does not mean that *Marsh* cannot initialize the system again.

 Accordingly, the plain language of the claim does *not* require or equate to *having never loaded* an operating system. The fact that the computer previously was turned on and loaded an operating does not mean that the computer cannot initialize again. Accordingly, Marsh does indeed teach flashing the ROM with an upgraded system during system initialization.
- (B) In response to applicant's argument that *Marsh* teaches away from the concept of flashing the ROM before an operating system is executed (See response page 10, second paragraph) the examiner respectfully disagrees. Again, Applicant's argument appears to be based on the premise that because an operating system was once loaded, *Marsh* cannot teach "before the operating system". Applicant argues that a user would have to reboot in order to have firmware upgraded (page 10, second paragraph). Again, examiner refers applicant to the rational used in section (A) above. The fact that the computer once loaded an operating system

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does not mean it cannot be re-initialized. Furthermore, in regard to Applicant's arguments relating to re-booting it is noted that the plain language of the claim does not preclude *re-booting*. Accordingly, the rejection is maintained with regard to the instant argument.

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- (C) In response to applicant's argument that *Doherty* teaches away from upgrading the BIOS system or firmware on the ROM without loading a portion of the operating system (See response page 10, third fourth paragraphs) the examiner respectfully disagrees. It is noted that *Doherty* teaches a Preboot Execution Environment (PXE), wherein software may be downloaded from a remote location over the network before loading an operating system (See *Doherty*, Column 1, lines 22-35) to obtain management services from a management server including application distribution and problem diagnostic tools (See Doherty, column 1, lines 50-53). *Doherty* also teaches that a BIOS (See Figure 2, 220 & Column 4, lines 1-11), which is distinct from the operating system may be implemented in software, hardware, or a combination of both. Accordingly, the fact that *Doherty* does not expressly teach downloading a BIOS upgrade does not teach away from downloading a BIOS upgrade as argued. Thus, the rejection is maintained in light of the instant argument.
- (D) In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning (See response page 11, second paragraph), it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, it would have been

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obvious to one of ordinary skill in the art, at the time the invention was made, to combine *Doherty's* teaching of downloading software applications from a remote managing location in a pre-boot environment with a BIOS application. *Doherty's* express disclosure of BIOS software would have motivated the combination. *Marshes* teaching of subsequently, rebooting after downloading the software and installing the software during initializing, thereby reads on the plain language of the claim. Again, it is noted that "without rebooting" is not read into the claim language.

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- (E) In response to applicant's argument that there is no suggestion to combine the references (See response page 11, third paragraph), the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the examiner refers the Applicant to section (C) above. Furthermore, one of ordinary skill in the art, would have been motivated to combine *Doherty*'s pre-boot environment software application download (See section (B)with a BIOS application download, particularly in light of *Doherty*'s teaching of BIOS software (See section (B) and *Marsh*'s disclosure of downloading BIOS software (See section (A) above).
- (F) Accordingly, independent claims 9, 16 and 27 are rejected and the dependent claims to independent claims 1, 9, 16 and 27 are rejected at least for the reasons disclosed hereinabove.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 4, 6, 7, 9, 11, 13, 15, 16, 18, 20, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marsh et al., US 2002/0073304 A1 (hereinafter Marsh) and further in view of Asco et al., US 6,516,346, (hereinafter Asco) and Jennery et al., US 6,742,025 (hereinafter Jennery) and further in view of Doherty et al., US 7,080,134 (art being made of record and hereinafter Doherty).

In regard to claim 1, Marsh discloses:

- "A computer system, comprising:

 a central processing unit (CPU);..." (E.g., see Fig. 1 & Page 3, [0027]),

 wherein, the microprocessor is the CPU.
- "...and a programmable read only memory (ROM) coupled to said CPU..." (E.g., see Fig. 1 & Page 1, [0007]), wherein, the non-volatile memory may be a EEPROM as disclosed in paragraph [0007] which is

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both erasable and programmable. Also, it is shown in Figure 1 that the ROM or non-volatile memory is coupled to the microprocessor.

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- "... said ROM containing a digital image; ..." (E.g., see Fig. 1 & Page 2, [0013]), wherein, instructions from the programmable non-volatile memory or ROM are inherently a digital image; therefore the ROM contains a digital image.
- "...wherein said CPU programs its ROM during a system initialization
 ... wherein the system initialization further comprises a booting of said
 system..." (E.g., see Fig. 4 & Page 5, [0048]), wherein, the flash
 application designated in the modified boot image, selected upon the
 next boot of the computer (system initialization), is erasing and then
 programming the non-volatile memory or ROM.
- "...a connection to a network..." (E.g., see Fig. 5 & Page 4, [0042]), wherein, the system is presented within a network configuration.
- "...flashes the system ROM with the upgraded image if the upgraded image is available for said ROM." (E.g., see Fig. 6 and Page 5,
 Paragraph [0047] and [0048]), wherein, the delivered firmware is the received upgraded image and the flash application flashes the ROM and installs the upgraded image.

But **Marsh** does not expressly disclose "...during the system initialization, said system sends a message to a server coupled to the network to determine whether an

upgraded image is available for said ROM" or "...during the system initialization, said system receives an upgraded...". However, **Asco** discloses:

"...said system sends a message to a server coupled to the network to determine whether an upgraded image is available for said ROM..."
 (E.g., see Fig. 3 and Column 4, lines 26-56), wherein, the microcode is the upgraded BIOS image for a programmable ROM.

Marsh and Asco are analogous art because they are both concerned with the same field of endeavor, namely, a firmware upgrade via the Internet. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify Marsh's method for updating firmware with Asco's invention. The motivation to do so would have been to further achieve Asco's objective of "...making the upgrade process more user friendly..." (Page 1, lines 43-44). Each individual user would not have to find and remember details of Internet addresses for the microcode supplier. This would save time and increase productivity by letting the individual user focus on other tasks.

Marsh and Asco disclose the system as described above. But Marsh and Asco do not expressly disclose "..."...during the system initialization, said system sends a message to a server coupled to the network ...". However Jennery discloses:

- "...during the system initialization, said system sends a message to a server coupled to the network_..." (E.g., see Figure 8A (72) & Column 13, lines 36-39), wherein the system (network device), during system

initialization, sends or forwards a message (trigger data) to a server coupled to a network.

- "...during the system initialization, said system receives an upgraded..." (E.g., see Figure 8A (76) & Column 3, lines 39-44), wherein the system (network device), during system initialization or boot sequence, receives (trigger data) from a server coupled to a network.

Jennery, and the combined teaching of Marsh and Asco, are analogous art because they are both concerned with the same field of endeavor, namely, an automated method to update software. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the combined teaching method for updating software with Jennery's invention. The motivation to do so would have been to further achieve Marsh's objective of "... avoiding manual intervention..." (Page 2, Paragraph [0013]), and Asco's objective as disclosed above.

Marsh, Asco and Jennery disclose the system as described above. But they do not expressly disclose "... before loading any portion of the operating system in a random access memory associated with the CPU..." However Doherty discloses:

- "...before loading any portion of the operating system in a random

access memory associated with the CPU..." (E.g., see Fig. 2 &

Column 1, lines 23-36), wherein at boot up before loading an operating system into main memory, a client may request instructions which install an operating system. Additionally, it should be noted that

Doherty also discloses that the BIOS 220 is distinct from an operating system that client may boot to during boot-up (see Column 4, lines 4-7)

Doherty, and the combined teaching of Marsh, Asco and Jennery, are analogous art because they are both concerned with the same field of endeavor, namely, an automated method to update software. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Marsh's teaching of updating software by flashing the ROM upon startup (see Marsh above), with Doherty's teaching of receiving the instructions to do so during start up as well. The motivation to do so would have been to further achieve Marsh's objective of "... avoiding manual intervention..." (Page 2, Paragraph [0013]), and Asco's objective as disclosed above.

In regard to claim 4, claim 4 is rejected as a system of previously disclosed claim 1, wherein the corresponding limitations of claim 4 are addressed in claim 1.

In regard to claim 6, Marsh, Asco, Jennery and Doherty disclose the system of claim 1 above. But in claim 1, they did not disclose expressly "...wherein the message includes an indication of the version of the ROM's current image." However, Asco discloses:

- "...wherein the message includes an indication of the version of the ROM's current image." (E.g., see Fig. 3 & Column 1, lines 48-63), wherein, the microcode level is the version of the ROM's current image.

In regard to claim 7, Marsh, Asco, Jennery and Doherty disclose the system of claim 1 above. But in claim 1, they did not disclose expressly "... wherein the message includes an indication of the class of the ROM." However, Asco discloses:

- "...wherein the message includes an indication of the an indication of the class of the ROM." (E.g., see Fig. 3 & Column 1, lines 48-63), wherein, the relevant hardware configuration is an indication of the class of the ROM.

In regard to claim 9, claim 9 is rejected as a method version of claim 1.

Correspondingly, Marsh, Asco, Jennery and Doherty disclose the limitations of claim 9 as described above in claim 1. Thus the limitations are met for claim 9 as disclosed in the respective above claims.

Respectively, claims 11, 13 and 15 are rejected as method versions of claims 4, 6 and 7. Likewise, the limitations of the aforementioned claims are disclosed as described in their corresponding claims. Thus, the limitations are met for claims 11, 13 and 15.

In regard to claim 16, Marsh discloses "A ROM image system..." as disclosed in claim 1, wherein the system of claim 1 is presented within a network configuration. But Marsh does not disclose expressly "... a server; and a database accessible by said server, said database storing information regarding ROM images; wherein said server receives a message from computer to determine if an upgrade exists for the computer's ROM image, uses said information to determine if an upgrade is available for the computer's ROM image and transmits a message to the computer indicating whether an

upgrade is available" or a "...message from a computer that is currently undergoing a system initialization..." and "...transmits a message to the computer indicating whether an upgrade is available during the system initialization of the computer." However, **Asco** discloses:

- "...comprising: a server; and a database accessible by said server, said database storing information regarding ROM images; wherein said server receives a message from computer to determine if an upgrade exists for the computer's ROM image, uses said information to determine if an upgrade is available for the computer's ROM image and transmits a message to the computer indicating whether an upgrade is available." (E.g., see Figure 2 & Column 1 lines 45 - 63), wherein the remote system is the server and the database associated with the remote system contains current microcode level and configuration information regarding the computer's ROM image. The notification to the computer system is the message indicating that an updated image is available.

But, **Asco** does not expressly disclose a "...message from a computer that is currently undergoing a system initialization..." and "...transmits a message to the computer indicating whether an upgrade is available during the system initialization of the computer." However, **Jennery** discloses:

"...message from a computer that is currently undergoing a system initialization..." (E.g., see Figure 8A (72) & Column 13, lines 36-39),

wherein the system (network device), during system initialization, sends or forwards a message (trigger data) to a server coupled to a network.

"...transmits a message to the computer indicating whether an upgrade is available during the system initialization of the computer." E.g., see Figure 8A (76) & Column 3, lines 39-44), wherein the system (network device), during system initialization or boot sequence, receives (trigger data) from a server coupled to a network.

The remaining limitations are met as disclosed in claim 1.

In regard to claim **18**, the rejections of base claim **16** are incorporated as explained above. Furthermore, **Asco** discloses:

- "...said response includes a pointer to where an upgraded image is located." (E.g., see Figure 1 & Column 2, lines 23-27), wherein, the Internet address is a pointer to where an upgraded image is located.

In regard to claim **20, Marsh, Asco**, **Jennery** and **Doherty** disclose the method of claim **18** as explained above. Furthermore, **Asco** discloses:

- "...said pointer includes an IP address." (E.g., see Column 2, lines 23 - 27), wherein, the Internet Address is a pointer, which includes an IP address.

In regard to claim 27, claim 27 encompasses some limitations from claim 16 and claim 1, and also includes further limitations disclosed by Asco. Claim 1 discloses a computer having a programmable ROM coupled to a server communicating with a

network, during initialization, without execution of an operating system associated with the CPU. Claim 16 discloses a request to a server, including storage for a ROM image, and a computer requesting a ROM image update from the said server. But the aforementioned claims do not expressly disclose: "...proxy enterprise ROM server to which the computers couple, said proxy enterprise ROM server communicating with a network external to the enterprise..." or "...a plurality of computers..." or "...includes a first storage area for an untested ROM image update, and a second storage area for an approved ROM image update to be installed in the at least one of said computers, wherein the approved ROM image update comprises the untested ROM image update that has undergone at least one suitable approval test...". However, Asco discloses:

"... a proxy enterprise ROM server to which the computers couple, said proxy enterprise ROM server communicating with a network external to the enterprise..." and "... a plurality of computers...". (E.g., see Figure 2 & Column 2, line 64 – Column 3, line 10), wherein, a proxy server to which computers are coupled is the enterprise ROM server. A wide are data processing network comprising a local network connected via the Internet is interpreted as an enterprise computing system comprising a plurality of computers

But, Marsh, Asco, Jennery and Doherty do not expressly disclose "...includes a first storage area for an untested ROM image update, and a second storage area for an approved ROM image update..." or "... checks the second storage area for the

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approved ROM image update to be installed in the at least one of said computers, wherein the approved ROM image update comprises the untested ROM image update that has undergone at least one suitable approval test...". However, it would have been obvious to one of ordinary skill in the art, to test the upgrade before deploying it. It would have been obvious because it is old and well known in the art that before an upgrade or revision is issued for deploying it should be tested. Therefore it would have been obvious to include a first storage area for an untested ROM image update and to install the tested upgrade image as is well known in the art.

In regard to claim 28, the rejections of base claim 1 are incorporated.

Furthermore, Jennery discloses:

- "...upon each occurrence of the system initialization". (E.g., see Figure 8A (72) & Column 13, lines 36-39), wherein the system (network device), during system boot sequence, which happens on each occurrence of the system initialization, sends or forwards a message (trigger data) to a server coupled to a network.
- 4. Claims **5**, **12** and **19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Marsh**, **Asco**, **Jennery** and **Doherty** as applied to claim **1** above, and further in view of Martinez, US ,594,757 (hereinafter **Martinez**).

In regard to claim **5**, **Marsh**, **Asco**, **Jennery** and **Doherty** disclose the system of claim **1** above. But in claim **1**, they did not disclose expressly "...wherein said system

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receives a link to another server which provides the upgraded image." However, Martinez, discloses:

- "...wherein said system receives a link to another server which provides the upgraded image." (E.g., see Fig. 3A & Column 2, line 65 – Column 3, line 2), wherein it would have been obvious to a person of ordinary skill in the art to store a web page on a server.

Martinez and the combined teachings of Marsh, Asco, Jennery and Doherty, are analogous art because they are both concerned with the same field of endeavor, namely, an upgradeable BIOS program. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to implement

Martinez's limitation into the combined teaching method for updating firmware. The motivation to do so would have been to further decrease manual intervention by simply providing the URL to an executable rather than manually downloading it to a prespecified server. The advantages would be time and cost savings.

Claim 12 is rejected as method versions of claim 5. Likewise, the limitations of the aforementioned claim are disclosed as described. Thus, the limitations are met for claim 12.

In regard to claim **19**, the rejections of base claim **18** are incorporated as explained above. Furthermore, **Martinez** discloses:

"... said pointer includes a URL." (E.g., see Figure 3A & Column 2, line 65 – Column 3, line 2), wherein the retrieved page is a pointer which includes a URL.

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5. Claims 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marsh, Asco, Jennery and Doherty as applied to claim 1 above, and further in view of Olarig (US 6,009,524).

In regard to claim 8, Marsh, Asco, Jennery and Doherty disclose the system of claim 1 above. But in claim 1, they did not disclose expressly "...wherein said message includes an encryption key to be used to help assure the authenticity of the image."

However, Olarig discloses:

"...wherein said message includes an encryption key to be used to help assure the authenticity of the image." (E.g., see Fig. 2 & Column 4, lines 59-67), wherein, a dual-key digital-signature-verification system are used to assure authenticity.

Olarig and the combined teachings of Marsh, Asco, Doherty and Jennery are analogous art because they are both concerned with the same field of endeavor, namely, an upgradeable BIOS program. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to implement Olarig's limitation into the combined teaching method for updating firmware. The motivation to do so would have been to assure authenticity of the BIOS program. Thereby, eliminating a tampered program that could have severe time and cost consequences in addition to security issues.

Claim **14** is rejected as a method version of claim **8**. Likewise, the limitations of the aforementioned claim are disclosed as described. Thus, the limitations are met for claim **12**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Romano whose telephone number is (571) 272-3872. The examiner can normally be reached on 8-5:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJR

TUAN DAM SUPERVISORY PATENT EXAMINER